2002H0 TH62200T

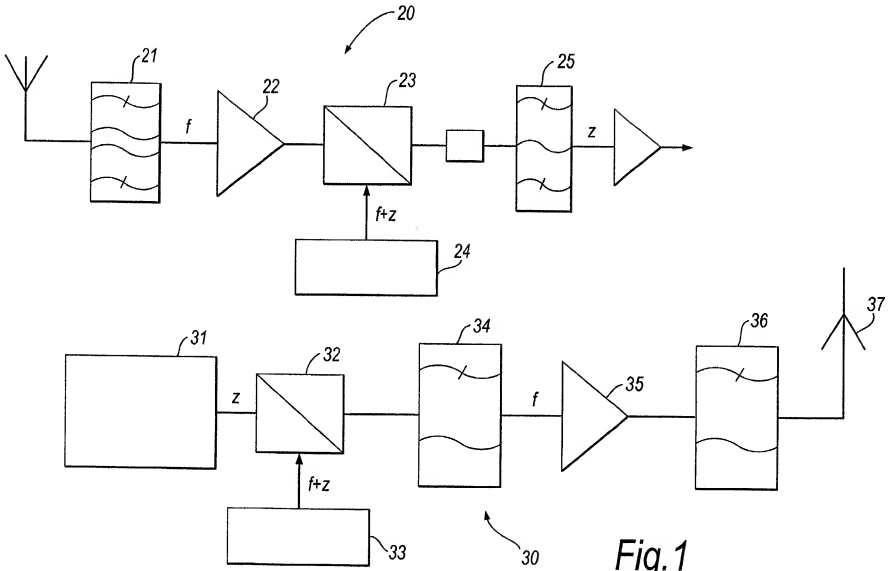

Fig.1

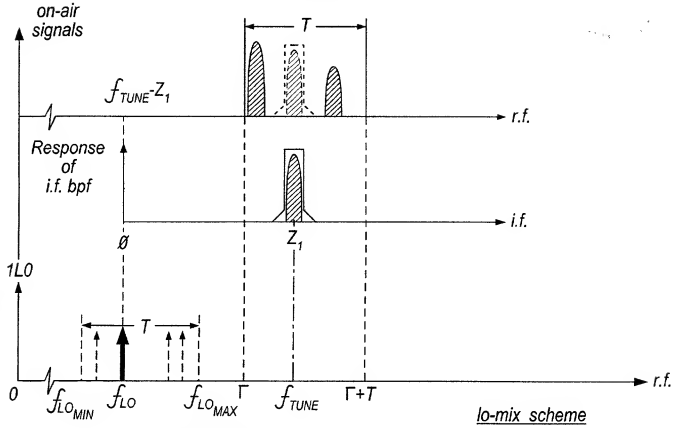

Fig.2a

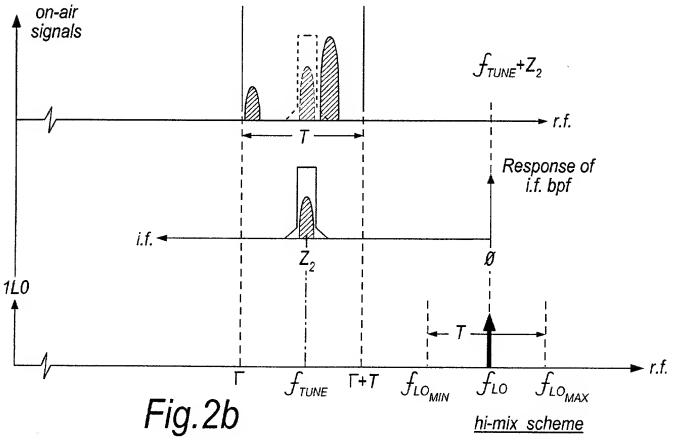

Fig.2b

20070716627001

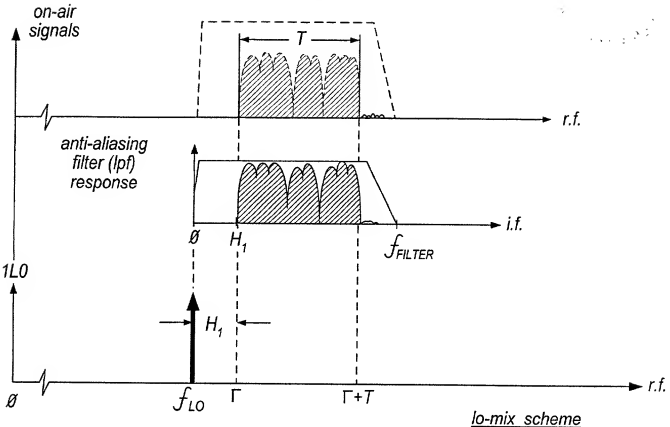
on-air signals
T
r.f.
anti-aliasing filter (lpf) response
i.f.
Ø
H1
fFILTER
1L0
H1
Ø
fLO
Γ
Γ+T
r.f.
lo-mix scheme

Fig.3a

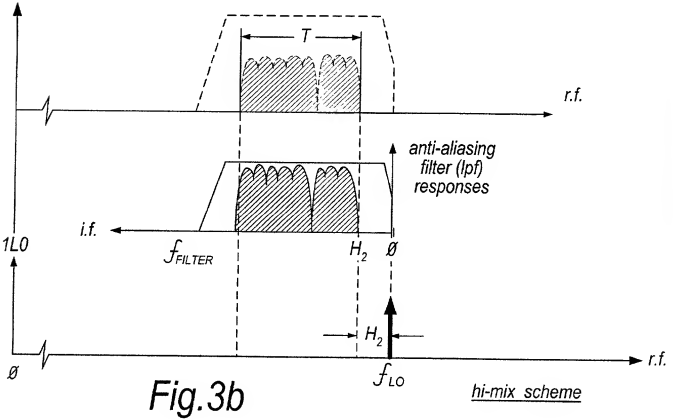
T
r.f.
anti-aliasing filter (lpf) responses
i.f.
1L0
fFILTER
H2
Ø
H2
Ø
fLO
r.f.
hi-mix scheme

Fig.3b

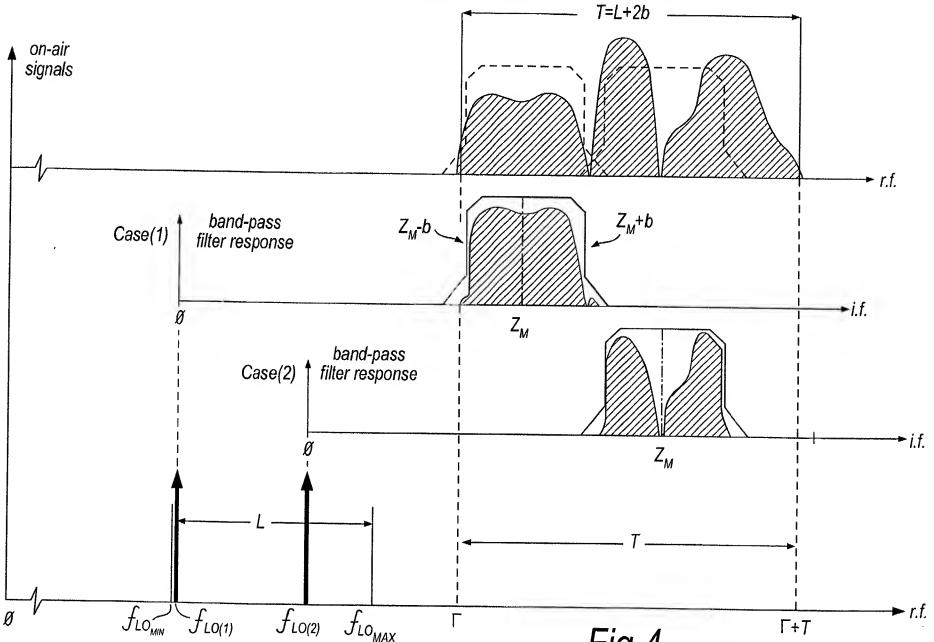
T=L+2b
on-air signals
r.f.
Case(1)
band-pass filter response
Z_M-b
Z_M+b
i.f.
ø
Z_M
Case(2)
band-pass filter response
i.f.
ø
Z_M
L
T
ø
$f_{LO_{MIN}}$
$f_{LO(1)}$
$f_{LO(2)}$
$f_{LO_{MAX}}$
Γ
Γ+T
r.f.

Fig.4

2006-10-17 17:62:00

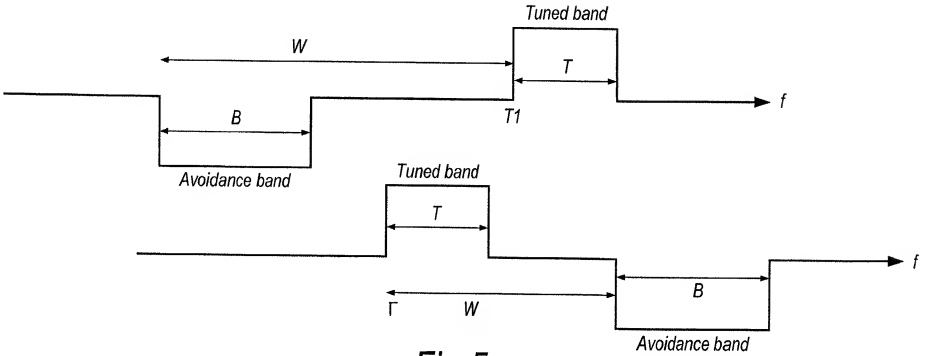

Fig.5

2003401 1004 2001

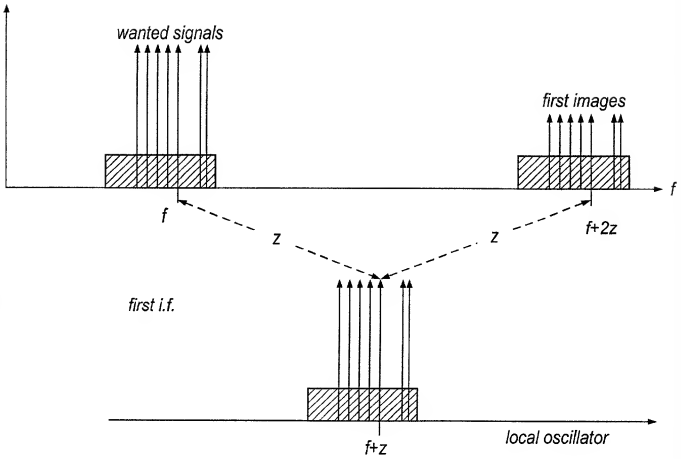

Fig.6

First Image Band

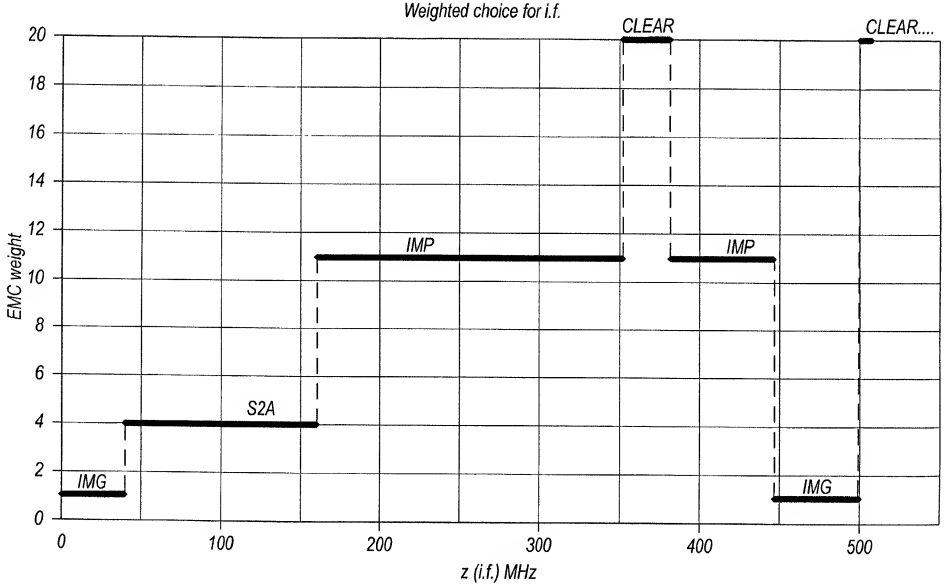
Weighted choice for i.f.
CLEAR
CLEAR....
IMP
IMP
S2A
IMG
IMG
EMC weight
z (i.f.) MHz
0
2
4
6
8
10
12
14
16
18
20
0
100
200
300
400
500

Fig.7

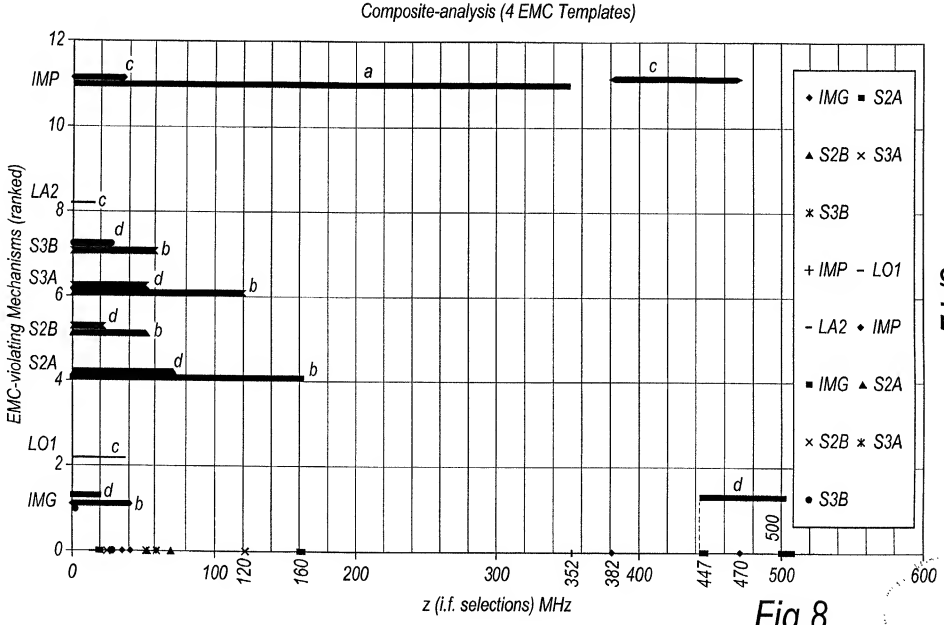
Composite-analysis (4 EMC Templates)
EMC-violating Mechanisms (ranked)
IMP
LA2
S3B
S3A
S2B
S2A
LO1
IMG
z (i.f. selections) MHz
0
100
120
160
200
300
352
382
400
447
470
500
600
IMG ■ S2A
▲ S2B × S3A
✱ S3B
+ IMP – LO1
– LA2 ◆ IMP
■ IMG ▲ S2A
× S2B ✱ S3A
● S3B

Fig.8

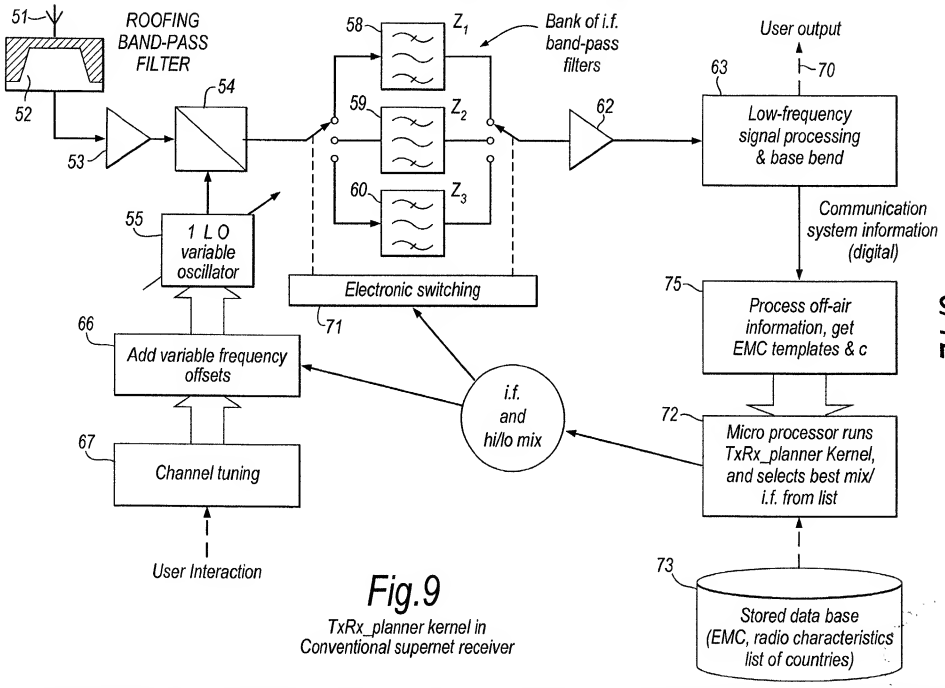

Fig.9

TxRx_planner kernel in
Conventional supernet receiver

2002n0*Th62.2001

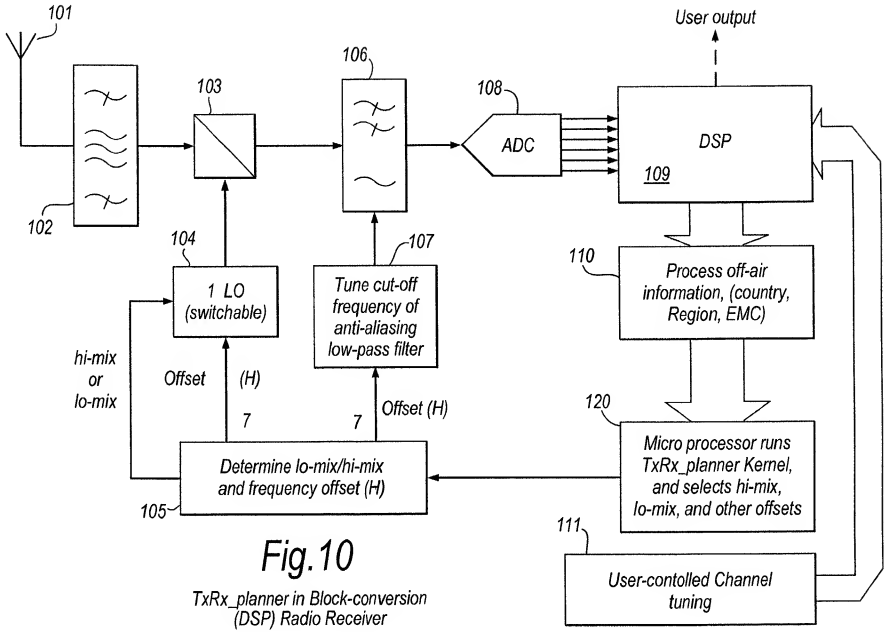

Fig.10

TxRx_planner in Block-conversion (DSP) Radio Receiver

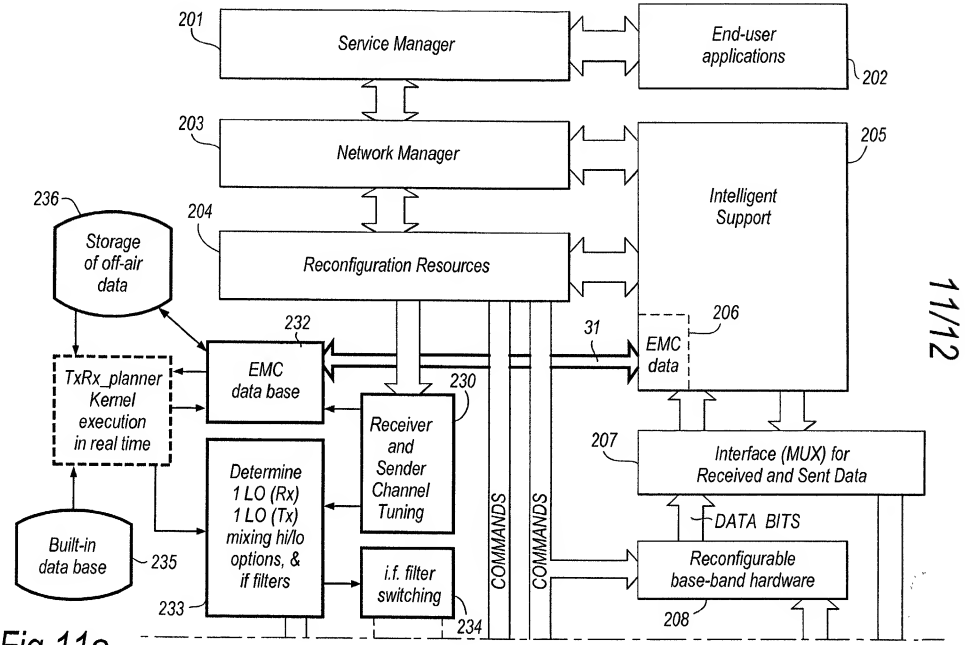
201
Service Manager
End-user applications
202
203
Network Manager
205
Intelligent Support
236
Storage of off-air data
204
Reconfiguration Resources
206
232
31
EMC data
EMC data base
TxRx_planner Kernel execution in real time
230
Receiver and Sender Channel Tuning
207
Interface (MUX) for Received and Sent Data
Determine 1 LO (Rx) 1 LO (Tx) mixing hi/lo options, & if filters
COMMANDS
COMMANDS
DATA BITS
Built-in data base
235
i.f. filter switching
Reconfigurable base-band hardware
233
234
208

Fig.11a

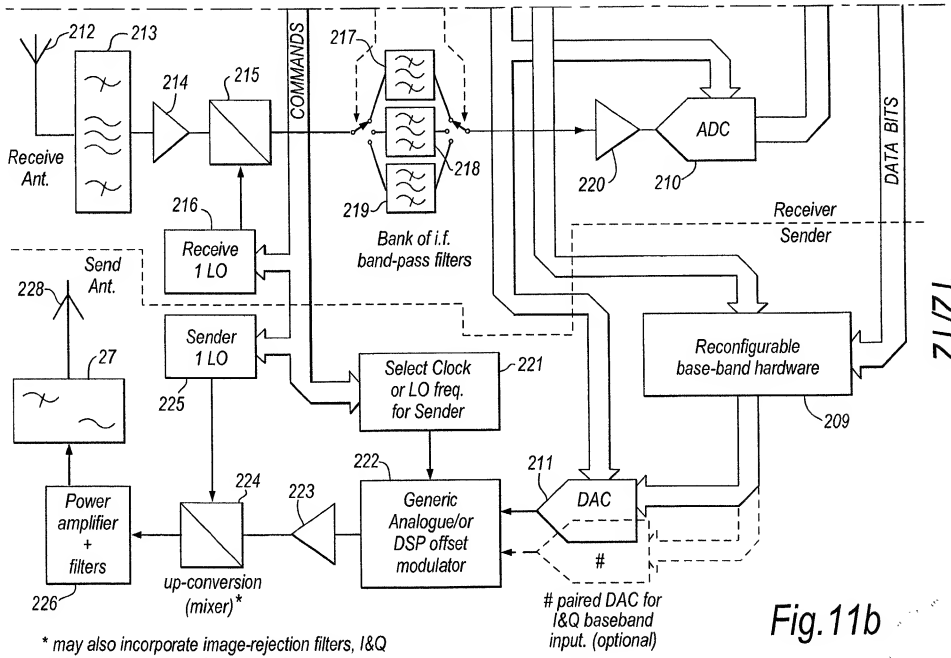

Fig.11b

* may also incorporate image-rejection filters, I&Q image-suppression frequency changer, etc.